UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

DATE: JUN 2 4 2002

SUBJECT: INSPECTION REPORT - Caterpillar Inc., Aurora, Illinois

FROM: Sarah Graham, Engineer
AECAS (IL/IN)

THRU: Brent Marable, Chief
AECAS (IL/IN)

TO: File

Date of Inspection: June 12, 2002

Attendees: Sarah Graham, U.S. EPA
Kathy Triantafillou, U.S. EPA
Tanya Boomer, U.S. EPA
Robert Stumreiter, Caterpillar

Purpose of Inspection: To determine compliance of the boilers at the facility with the Clean Air Act and the State Implementation Plan including compliance with PSD/NSR regulations.

Company Description and Background:

Plant Location: Rt. 31 South, P.O. Box 348, Aurora, Illinois 60507

Phone Number: 630-859-5303

Plant Manager: Robert Stumreiter, Operations Consultant, Facilities Engineering

Discussion with Plant Personnel

U.S. EPA arrived at the facility at 11:06 am and met with Robert Stumreiter. U.S. EPA presented their credentials to Mr. Stumreiter . Mr. Stumreiter has been at the facility for 29 years working in the boiler plant. Caterpillar has three coal fired boilers which were shut down in May 2002 when the coal supply was gone. A new co-gen plant was under construction during the inspection. The co-gen plant will produce 14 MW of electricity to power the entire Caterpillar plant. Caterpillar also operates two natural gas boilers as back up for the plant. At the time of the inspection the natural gas boilers were the only boilers operating. Caterpillar plans to have the co-gen plant operating by the end of July 2002.

The Caterpillar plant was built in 1956. The coal fired boilers were in stalled in 1958 and the natural gas boilers were installed in 1967. The burners on the natural gas boilers were first modified in the 1970s for duel fuel burning. Low Nox burner were retofitted into the natural gas

boilers in 1994. In 1998, the burners were replaced with Coen burners. There is no flue gas recirculation in the boilers.

Caterpillar had tube failures in both natural gas boilers in the early 80s and retubed both boilers in 1982 and 1983. The economizers on both natural gas boilers were replaced in the 1970s. Mr. Stumreiter was not sure of the exact year. Caterpillar did not obtain construction or PSD permits for the retrofits on the natural gas boilers. The only permit change was for a fuel switch.

Caterpillar does not have any CEMs on the stacks for the natural gas boilers. Mr. Stumreiter did not remember if stack tests had been preformed on the natural gas boilers. Mr. Stumreiter said stack tests were conducted on the coal fired boilers. Once a year, the fuel oil is tested for the natural gas boilers.

Caterpillar maintains fuel usage reports and reports of any failures on the boilers. There haven't been any tube failures since the 1980s. The last tube replacement cost about $50,000. When a failure occurs, the operator reports it to Mr. Stumreiter and then Mr. Stumreiter allocates money from the maintenance budget to repair the failed component. For larger upgrades, the request is made capital and goes to the accounting division. The only capital project Mr. Stumreiter could remember at the time of the inspection was the retrofitting of the low NOx burners.

Plant Inspection/Tour

Mr. Stumreiter showed U.S. EPA the two natural gas boilers. One was operating at the time of the inspection. Mr. Stumreiter showed the port holes where the flames are burning the natural gas.

Since the coal fired boilers were shut down during the inspection, Mr. Stumreiter opened up one of the boilers. He showed U.S. EPA the stoker grates and the boiler tubes in the main furnace area. He also pointed out where the two convection passes and the economizer are. Mr. Stumreiter showed and explained the ash removal system. The baghouse was open at the time of the inspection. U.S. EPA looked in one of the open modules. The baghouse is scheduled to be removed during the summer of 2003.

U.S. EPA left the facility at 1:30 pm.